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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,072	05/30/2001	L. Scott Bloebaum	4015-948	6752
24112	7590	06/30/2005	EXAMINER	
COATS & BENNETT, PLLC P O BOX 5 RALEIGH, NC 27602			SOBUTKA, PHILIP	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/870,072	<b>Applicant(s)</b> BLOEBAUM ET AL.	
	<b>Examiner</b> Philip J Sobutka	<b>Art Unit</b> 2684	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-29 is/are allowed.
- 6) ☒ Claim(s) 1,10,11 and 20 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 12-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. Claims 1,10,11,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watters et al (US 6,230,018) in view of Soliman (US 6,188,354).

Consider claims 1,11. Watters teaches a method of performing synchronization comprising: obtaining predetermined TDOA values for a plurality of navigation signals (Watters see especially figs 9,10); performing synchronizations on one navigation signal and calculating the synchronization for at least one remaining navigation signal based on the predetermined TDOA values (Watters see especially fig 11). Note that in order to synchronize to the navigation codes would require synchronizing to the bit edges. Watters lacks a teaching of the navigation signal coming from satellites. Soliman teaches that using navigation signals from satellites is the most accurate approach to determining location (Soliman col 1, lines 55-64). It would have been obvious to one of ordinary skill in the art to modify Watters to use navigation signals from satellites in order to use the most accurate method for determining location.

As to claims 10,20, note that the predetermined TDOA values for the signals are retrieved from an associated memory (Watters, see especially fig 7, col 7, lines 52-64).

### ***Allowable Subject Matter***

2. Claims 21-29 are allowed.

Consider claim 21. The nearest prior art as shown in Watters fails to teach a wireless system comprising: at least one mobile terminal containing a position estimator and periodically transmitting RF signals; and a satellite navigation server to transmit

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relative timing information between satellite navigation signals to the mobile via a radio access network, wherein the relative timing information is used by the mobile terminal to overcome interference from the periodic transmission of RF signals in order to perform bit edge synchronization.

Consider claim 25. The nearest prior art as shown in Watters fails to teach a wireless system mobile terminal comprising: a transceiver for establishing two way wireless communications via periodic RF transmissions; a position estimator receiving satellite navigation signals, the signals at least partially obscured by the periodic RF transmissions; a controller performing bit edge synchronization on the satellite navigation signal in the presence of the periodic RF transmission by the use of predetermined satellite navigation signal information.

3. Claims 2-9,12-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Consider claim 2. The nearest prior art as shown in Watters fails to teach the method of claim 1, wherein performing bit edge synchronization on the satellite signal comprises: identifying at least one TDOA value between the duration of the periodic interference and the period of the periodic interference less the duration, the TDOA value associated with a first and second satellite signal; performing bit edge synchronization on the first satellite signal; and if bit edge synchronization on the first satellite signal fails due to the periodic interference, performing bit edge synchronization on the second satellite signal.

Consider claims 3,13. The nearest prior art as shown in Watters fails to teach the method of claims 1 and 11 respectively, wherein performing bit edge synchronization on the satellite signal comprises: ranking the TDOA values into a list; iteratively performing bit edge synchronization on each satellite signal according to the TDOA list until bit edge synchronization on one satellite signal is successful.

Consider claims 6,16. The nearest prior art as shown in Watters fails to teach the method of claims 1, and 11, respectively, wherein obtaining predetermined TDOA values for the plurality of navigation satellites signals comprises receiving information necessary to determine the TDOA values via an associated wireless communications mobile terminal.

Consider claim 12. The nearest prior art as shown in Watters fails to teach the method of claim 11, wherein the first and second navigation satellite signal are selected from among a plurality of navigation satellite signal by identifying a TDOA value between the duration of the periodic interference and the period of the periodic interference less the durations, the TDOA value associated with the first and second satellite signals.

#### ***Response to Amendment***

4. Applicant's arguments filed February 24,2005 have been fully considered but they are not persuasive.

It would appear that applicant's arguments are more limited than the claims. Applicant argues that the instant invention would use synchronization from a signal so obscured by interference that it could not normally be synchronized to, by combining it

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with another signal that was not as badly affected by interference. However, as the claims are written, it merely recites the situation where one signal of is subject to some interference, the claims lack the limitation that the interference is so bad that it could not be used alone.

As to applicant's arguments regarding "bit edge" synchronization, the examiner maintains that the ideal goal of synchronization is to synch to the "bit edge" therefore any synchronization would be a "bit edge synchronization". If the instant specification provides a narrower meaning, this should be clearly defined.

### ***Conclusion***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882.

9. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

On July 15, 2005, the Central FAX Number will change to **571-273-8300**. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005.

After September 15, 2005, the old number will no longer be in service and **571-273-8300** will be the only facsimile number recognized for "centralized delivery".


**CENTRALIZED DELIVERY POLICY:** For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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NAY MAUNG  
SUPERVISORY PATENT EXAMINER